Message

From: Bunker, Byron [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=DDF7BCF023D241A9A477A2DC75D5901C-BUNKER, BYRON]

Sent: 6/1/2017 5:14:06 PM

To: Cook, Leila [cook.leila@epa.gov]

Subject: FW: FCA -- Interesting paper by software engineers analyzing the VW and FCA defeat devices

Attachments: 2017-05-28_Ruhr and UCSD paper on VW diesel defeat devices.pdf

Hi Lee,

Attached is the article from Phil.

Thanks,

Byron

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2000 Traverwood Drive Ann Arbor, MI 48105 Bunker.Byron@epa.gov Phone: (734) 214-4155 Mobile: (734) 353-9623

From: Bunker, Byron

Sent: Thursday, June 01, 2017 10:37 AM **To:** Haugen, David haugen.david@epa.gov

Cc: Grundler, Christopher <grundler.christopher@epa.gov>

Subject: FW: FCA -- Interesting paper by software engineers analyzing the VW and FCA defeat devices

Hi David,

I am wondering if someone on the NCAT team might have the right background to interpret the attached article. Please see Phil's question copied below.

Thanks,

Byron

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From: Brooks, Phillip

Sent: Thursday, June 01, 2017 9:43 AM

To: Grundler, Christopher <grundler.christopher@epa.gov>; Bunker, Byron <bunker.byron@epa.gov>

Cc: Belser, Evan < Belser. Evan @epa.gov>

Subject: FCA -- Interesting paper by software engineers analyzing the VW and FCA defeat devices

When convenient, I would like to discuss whether we have anyone in-house who can explain this article to me in terms I can understand. I have read the paper, and I think it suggests some interesting insights into the connection between Bosch and the use of cycle detection and cycle evasion schemes, but I want ot better understand what the authors are saying. If OTAQ does not have someone who is able to break this down for me, I can get our contractor to bring in someone.